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By: Nancy Ramos

Printed: _____

Nancy Ramos

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Bandman et al.

Title: HUMAN RETICULOCALBIN ISOFORMS

Serial No.: To Be Assigned

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SUBMISSION OF FORMAL DRAWINGS

Sir:

Transmitted herewith are Figures 1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 3A, 3B, 4A, 4B, 5A, 5B, and 5C, as eighteen (18) sheets of formal drawings for this application. Each sheet of drawing indicates the identifying indicia suggested in 37 CFR Section 1.84(c) on the reverse side of the drawings.

Applicants believe that no fee is due with this paper. However, if the Commissioner determines that a fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 09-0108. **A duplicate copy of this communication is enclosed.**

If there are any questions regarding the above, the Examiner is invited to call the undersigned at 650-855-0555.

Respectfully submitted,

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CGC	AGA	GCG	GAC	GTG	GAG	AGC	GGA	CGN	CAG	CTG	GAT	AAC	AGG	GGA	CCG	ATG	ATG	54
		9		18		27		36		45						M	M	
TGG	CGA	CCA	TCA	GTT	CTG	CTG	CTT	CTG	TTG	CTA	CTG	AGG	CAC	GGG	GCC	CAG	GGG	108
W	R	P	S	V	L	L	L	L	L	L	L	R	H	G	A	Q	G	
		63		72		81		90		99								
AAG	CCA	TCC	CCA	GAC	GCA	GGC	CCT	CAT	GGC	CAG	GGG	AGG	GTG	CAC	CAG	GCG	GCC	162
K	P	S	P	D	A	G	P	H	G	Q	G	R	V	H	Q	A	A	
		117		126		135		144		153								
CCC	CTG	AGC	GAC	GCT	CCC	CAT	GAT	GAC	GCC	CAC	GGG	AAC	TTC	CAG	TAC	GAC	CAT	216
P	L	S	D	A	P	H	D	A	H	G	N	F	Q	Y	D	H		
		171		180		189		198		207								
GAG	GCT	TTC	CTG	GGA	CGG	GAA	GTG	GCC	AAG	GAA	TTC	GAC	CAA	CTC	ACC	CCA	GAG	270
E	A	F	L	G	R	E	V	A	K	E	F	D	Q	L	T	P	E	
		225		234		243		252		261								
GAA	AGC	CAG	GCC	CGT	CTG	GGG	CGG	ATC	GTG	GAC	CGC	ATG	GAC	CGC	GCG	GGG	GAC	324
E	S	Q	A	R	L	G	R	I	V	D	R	M	D	R	A	G	D	
		279		288		297		306		315								
GGC	GAC	GGC	TGG	GTG	TCG	CTG	GCC	GAG	CTT	CGC	GCG	TGG	ATC	GCG	CAC	ACG	CAG	378
G	D	G	W	V	S	L	A	E	L	R	A	W	I	A	H	T	Q	
		333		342		351		360		369								

FIGURE 1A

387	CAG CGG CAC ATA CGG GAC TCG GTG AGC GCG GCC TGG GAC ACG TAC GAC ACG GAC	405	414	423	432
	Q R H I R D S V S A A W D T Y D T D				
441	CGC GAC GGG CGT GTG GGT TGG GAG GAG CTG CGC AAC GCC ACC TAT GGC CAC TAC	459	468	477	486
	R D G R V G W E E L R N A T Y G H Y				
495	GCG CCC GGT GAA GAA TTT CAT GAC GTG GAG GAT GCA GAG ACC TAC AAA AAG ATG	513	522	531	540
	A P G E E F H D V E D A E T Y K K M				
549	CTG GCT CGG GAC GAG CGG CGT TTC CGG GTG GCC GAC CAG GAT GGG GAC TCG ATG	567	576	585	594
	L A R D E R E R F R V A D Q D G D S M				
603	GCC ACT CGA GAG GAG CTG ACA GCC TTC CTG CAC CCC GAG GAG TTC CCT CAC ATG	621	630	639	648
	A T R E E L T A F L L H P E E F P H M				
657	CGG GAC ATC GTG ATT GCT GAA ACC CTG GAG GAC CTG GAC AGA AAC AAA GAT GGC	675	684	693	702
	R D I V I A E T L L E D L D R N K D G				
711	TAT GTC CAG GTG GAG GAG TAC ATC GCG GAT CTG TAC TCA GCC GAG CCT GGG GAG	729	738	747	756
	Y V Q V E E Y I A D L Y S A E P G E				

FIGURE 1B

765	774	783	792	801	810
GAG GAG CCG GCG TGG GTG CAG ACG GAG AGG CAG CAG TTC CGG GAC TTC CGG GAT					
E P A W V Q T E R Q Q F R D F R D					
819	828	837	846	855	864
CTG AAC AAG GAT GGG CAC CTG GAT GGG AGT GAG GTG GGC CAC TGG GTG CTG CCC					
L N K D G H L L D G S E V G H W V L P					
873	882	891	900	909	918
CCT GCC CAG GAC CAG CCC CTG GTG GAA GCC AAC CAC CTG CTG CAC GAG AGC GAC					
P A Q D Q P L L V E A N H L L E S D					
927	936	945	954	963	972
ACG GAC AAG GAT GGG CGG CTG AGC AAA GCG GAA ATC CTG GGT AAT TGG AAC ATG					
T D K D G R L L S K A E I L G N W N M					
981	990	999	1008	1017	1026
TTT GTG GGC AGT CAG GCC ACC AAC TAT GGC GAG GAC CTG ACC CGG CAC CAC GAT					
F V G S Q A T N Y G E D L T R H H D					
1035	1044	1053	1062	1071	1080
GAG CTG TGA GCA CCG CGC ACC TGC CAC AGC CTC AGA GGC CCG CAC AAT GAC CGG					
E L					
1089	1098	1107	1116	1125	1134
AGG AGG GGC CGC TGT GGT CTG GCC CCC TCC CTG TCC AGG CCC CGC AGG AGG CAG					

FIGURE 1C

1143	1152	1161	1170	1179	1188
ATG CAG TCC CAG GCA TCC TCC TGC CCC TGG GCT CTC AGG GAC CCC CTG GGT CGG					
1197	1206	1215	1224	1233	1242
CTT CTG TCC CTG TCA CAC CCC CAA CCC CAG GGA GGG GCT GTC ATA GTC CCA GAG					
1251	1260	1269	1278	1287	1296
GAT AAG CAA TAC CTA TTT CTG ACT GAG TCT CCC AGC CCA GAC CCA GGG ACC CTT					
1305	1314	1323	1332	1341	1350
GGC CCC AAG CTC AGC TCT AAG AAC CGC CCC AAC CCC TCC AGC TCC AAA TCT GAG					
1359	1368	1377	1386	1395	1404
CCT CCA CCA CAT AGA CTG AAA CTC CCC TGG CCC CAG CCC TCT CCT GCC TGG CCT					
1413	1422	1431	1440	1449	1458
GGC CTG GGA CAC CTC CTC TCT GCC AGG AGG CAA TAA AAG CCA GCG CCG GGA AAA					
AAA AA					

FIGURE 1D

9	18	27	36	45	54
CCC GCT TCC GGT TGG GCG GTG CTT GCG CGC GTG AGC TGA GCC GGT GGG TGA GCG					
63	72	81	90	99	108
GCG GCC ACG GCA TCC TGT GCT GTG GGG GCT ACG AGG AAA GAT CTA ATT ATC ATG					
117	126	135	144	153	162
GAC CTG CGA CAG TTT CTT ATG TGC CTG TCC CTG TGC ACA GCC TTT GCC TTG AGC					
D L R Q F L M C L S L C T A F A L S					
171	180	189	198	207	216
AAA CCC ACA GAA AAG AAG GAC CGT GTA CAT CAT GAG CAG CCT CAG CTT AGT GAC AAG					
K P T E K K D R V H H E P Q L S D K					
225	234	243	252	261	270
GTT CAC AAT GAT GCT CAG AGT TTT GAT TAT GAC CAT GAT GCC TTT TTT GGT GCT					
V H N D A Q S F D Y D H D A F L G A					
279	288	297	306	315	324
GAA GAA GCA AAG ACC TTT GAT CAG CTG ACA CCA GAA GAG AGC AAG GAA AGG CTT					
E E A K T F D Q L T P E E S K E R L					
333	342	351	360	369	378
GGA AAG ATT GTA AGT AAA ATA GAT GGC GAC AAG GAC GGG TTT TTT ACT GTG GAT					
G K I V S S K I D G D K D G F V T V D					

—

387	GAG CTC AAA GAC TGG ATT AAA TTT GCA CAA AAG CGC TGG ATT TAC GAG GAT GTA	396	405	414	423	432
E L K D W I K F A Q K R W I Y E D V						
441	GAG CGA CAG TGG AAG GGG CAT GAC CTC AAT GAG GAC GGC CTC GTT TCC TGG GAG	450	459	468	477	486
E R Q W K G G H D L N E D G L V S W E						
495	GAG TAT AAA AAT GCC ACC TAC GGC TAC GTT TTA GAT GAT CCA GAT CCT GAT GAT	504	513	522	531	540
E Y K N A T Y G Y V L D D P D D						
549	GGA TTT AAC TAT AAA CAG ATG ATG GTT AGA GAT GAG CGG AGG TTT AAA ATG GCA	558	567	576	585	594
G F N Y K Q M M V R D E R F K M A						
603	GAC AAG GAT GGA GAC CTC ATT GCC ACC AAG GAG GAG TTC ACA GCT TTC CTG CAC	612	621	630	639	648
D K D G D L I A T K E E F T A F L H						
657	CCT GAG GAG TAT GAC TAC ATG AAA GAT ATA GTA CAG GAA ACA ATG GAA GAT	666	675	684	693	702
P E E Y D Y M K D I V V Q E T M E D						
711	ATA GAT AAG AAT GCT GAT GGT TTC ATT GAT CTA GAA GAG TAT ATT GGT GAC ATG	720	729	738	747	756
I D K N A D G F I D L E E Y I G D M						

FIGURE 2B

765	TAC AGC CAT GAT GGG AAT ACT GAT GAG CCA GAA TGG GTA AAG ACA GAG CGA GAG	774	783	792	801	810
	Y S H D G N T D E P E W V K T E R E					
819	CAG TTT GTT GAG TTT CGG GAT AAG AAC CGT GAT GGG AAG ATG GAC AAG GAA GAG	828	837	846	855	864
	Q F V E F R D K N R D G K M D K E E					
873	ACC AAA GAC TGG ATC CTT CCC TCA GAC TAT GAT CAT GCA GAG GCA GAA GCC AGG	882	891	900	909	918
	T K D W I L P S D Y D H A E A R					
927	CAC CTG GTC TAT GAA TCA GAC CAA AAC AAG GAT GGC AAG CTT ACC AAG GAG GAG	936	945	954	963	972
	H L V Y E S D Q N K D G K L T K E E					
981	ATC GTT GAC AAG TAT GAC TTA TTT GTT GGC AGC CAG GCC ACA GAT TTT GGG GAG	990	999	1008	1017	1026
	I V D K Y D L F V G S Q A T D F G E					
1035	GCC TTA GTA CGG CAT GAT GAG TTC TGA GCT ACG GAG GAA CCC TCA TTT CCT CAA	1044	1053	1062	1071	1080
	A L V R H D E F					
1089	AAG TAA TTT ATT TTT ACA GCT TCT GGT TTC ACA TGA AAT TGT TTG CGC TAC TGA	1098	1107	1116	1125	1134

FIGURE 2C

1143	1152	1161	1170	1179	1188
GAC TGT TAC TAC AAA CTT TTT AAG ACA TGA AAA GGC GTA ATG AAA ACC ATC CCG					
1197	1206	1215	1224	1233	1242
TCC CCA TTC CTC CTC TCT GAG GGA CTG GAG GGA AGC CGT GCT TCT GAG GAA					
1251	1260	1269	1278	1287	1296
CAA CTC TAA TTA GTA CAC TTG TGT TTG TAG ATT TAC ACT TTG TAT TAT GTA TTA					
1305	1314	1323	1332	1341	1350
ACA TGG CGT GTT TAT TTT TGT ATT TTT CTC TGG TTG GGA GTA TGA TAT GAA GGA					
1359	1368	1377	1386	1395	1404
TCA AGA TCC TCA ACT CAC ACA TGT AGA CAA ACA TTA GCT CTT TAC TCT TTC TCA					
1413	1422	1431	1440	1449	1458
ACC CCT TTT ATG ATT TTA ATA ATT CTC ACT TAA CTA ATT TTG TAA GCC TGA GAT					
1467	1476	1485	1494	1503	1512
CAA TAA GAA ATG TTC AGG AGA GAG GAA AGA AAA ATA TAT GCT CCA CAA TTT					
1521	1530	1539	1548	1557	1566
ATA TTT AGA GAG AGA ACA CTT AGT CTT GCC TGT CAA AAA GTC CAA CAT TTC ATA					
1575	1584	1593	1602	1611	1620
GGT AGT AGG GGC CAC ATA TTA CAT TCA GTT GCT ATA GGT CCA GCA ACT GAA CCT					

FIGURE 2D

1629	1638	1647	1656	1665	1674
GCC ATT ACC TGG GCA AGG AAA GAT CCC TTT GCT CTA GGA AAG CTT GGC CCA AAT					
1683	1692	1701	1710	1719	1728
TGA TTT TCT TCT TTT TCC CCC TGT AGG ACT GAC TGT TGG CTA ATT TTG TCA AGC					
1737	1746	1755	1764	1773	1782
ACA GCT GTG GTG GGA AGA GAT AGG GCC AGT GTC TTG AAA ATC AAT CAA GTA GTG					
1791	1800	1809	1818	1827	1836
AAT GTG ATC TCT TTG CAG AGC TAT AGA TAG AAA CAG CTG GAA AAC TAA AGG AAA					
1845	1854	1863	1872	1881	1890
AAT ACA AAT GTT TTC GGG GCA TAC ATT TTT TTT CTG GGT GTG CAT CTG TTG AAA					
1899	1908	1917	1926	1935	1944
TGC TCA AGA CTT AAT TAT TTG CCT TTT GAA ATC ACT GTA AAT GCC CCC ATC CGG					
1953	1962	1971	1980	1989	1998
TTC CTC TTC TTC CCA GGT GTG CCA AGG AAT TAA TCT TGG TTT CAC TAC AAT TAA					
2007	2016	2025	2034	2043	2052
AAT TCA CTC CTT TCC AAT CAT GTC ATT GAA AGT GCC TTT AAC GAA AGA AAT GGT					
2061	2070	2079	2088	2097	2106
CAC TGA ATG GGA ATT CTC TTA AGA AAC CCT GAG ATT AAA AAA AGA CTA TTT GGA					

FIGURE 2E

2115	2124	2133	2142	2151	2160
TAA CTT ATA GGA AAG CCT AGA ACC TCC CAG TAG AGT GGG GAT TTT TTT CTT CTT					
2169	2178	2187	2196	2205	2214
CCC TTT CTC TTT TGG ACA ATA GTT AAA TTA GCA GTA TTA GTT ATG AGT TTG GTT					
2223	2232	2241	2250	2259	2268
GCA GTG TTC TTA TCT TGT GGG CTG ATT TCC AAA AAC CAC ATG CTG CTG AAT TTA					
2277	2286	2295	2304	2313	2322
CCA GGG ATC CTC ATA CCT CAC AAT GCA AAC CAC TTA CTA CCA GGC CTT TTT CTG					
2331	2340	2349	2358	2367	2376
TGT CCA CTG GAG AGC TTG AGC TCA CAC TCA AAG ATC AGA GGA CCT ACA GAG AGG					
2385	2394	2403	2412	2421	2430
GCT CTT TGG TTT GAG GAC CAT GGC TTA CCT TTC CTG CCT TTG ACC CAT CAC ACC					
2439	2448	2457	2466	2475	2484
CCA TTT CCT CCT CTT TCC CTC CTC TCC CCG CTG CCA AAA AAA AAA AAG GAA ACG					
2493	2502	2511	2520	2529	2538
TTT ATC ATG AAT CAA CAG GGT TTC AGT CCT TAT CAA AGA GAG ATG TGG AAA GAG					
2547	2556	2565	2574	2583	2592
CTA AAG AAA CCA CCC TTT GTT CCC AAC TCC ACT TTA CCC ATA TTT TAT GCA ACA					

FIGURE 2F

2601 CAA ACA CTG TCC TTT TGG GTC CCT TTC TTA CAG ATG GGA CCT CTT GAG GAA GGA 2646
2655 ATT ATC GTA TTC ,

FIGURE 2G

1	M M W - - - - R P S V L L L L L L L R H	922578
1	M A R G G R G R R L G L A L G L L L A L	GI 1262329
1	R - - - - - - - - - - - - - - - - -	GI 780361
17	G A O G K P - S P D A G P H G O G R V H	922578
21	V L A P R V L R A K P T V R K E R V V R	GI 1262329
2	- - - - - - - - - - - - - - - - -	GI 780361
36	Q A A P L S D A P H D D A H G N F Q Y D	922578
41	P D S E L G E R P P E D N Q S - F Q Y D	GI 1262329
2	- - - - - - - - - - - - - - - - -	GI 780361
56	H E A F L G R E V A K E F D Q L T P E E	922578
60	H E A F L G K E D S K T F D Q L T P D E	GI 1262329
2	- - - - - - - R D V A K E F D Q L T P E E	GI 780361
76	S Q A R L G R I V D R M D R A G D G D G	922578
80	S K E R L G K I V D R I D - - N D G D G	GI 1262329
16	S Q A R L G R I V D R M D L A G D S D G	GI 780361
96	W V S L A E L R A W I A H T Q Q R H I R	922578
98	F V T T E E L K T W I K R V Q K R Y I F	GI 1262329
36	W V S L A A L R A W I A H T Q Q R H I R	GI 780361
116	D S V S A A W D T Y D T D R D G R V G W	922578
118	D N V A K V W K D Y D R D K D D K I S W	GI 1262329
56	D S V S A A W H T Y D T D R D G R V G W	GI 780361
136	E E L R N A T Y G H Y - A P G E E F H D	922578
138	E E Y K Q A T Y G Y Y L G N P A E F H D	GI 1262329
76	E E L R N A T Y G H Y - E P G E E F H D	GI 780361
155	V E D A E T Y K K M L A R D E R R F R V	922578
158	S S D H H T F K K M L P R D E R R F K A	GI 1262329
95	V E G P	GI 780361

FIGURE 3A

175 A D Q D G D S M A T R E E L T A F L H P 922578
 178 A D L N G D L T A T R E E F T A F L H P GI 1262329

195 E E F P H M R D I V I A E T L E D L D R 922578
 198 E E F E H M K E I V V L E T L E D I D K GI 1262329

215 N K D G Y V Q V E E Y I A D L Y S A E P 922578
 218 N G D G F V D Q D E Y I A D M F S H E E GI 1262329

235 G E E E P A W V Q T E R Q Q F R D F R D 922578
 238 N G P E P D W V L S E R E Q F N E F R D GI 1262329

255 L N K D G H L D G S E V G H W V L P P A 922578
 258 L N K D G K L D K D E I R H W I L P Q D GI 1262329

275 Q D Q P L V E A N H L L H E S D T D K D 922578
 278 Y D H A Q A E A R H L V Y E S D K N K D GI 1262329

295 G R L S K A E I L G N W N M F V G S Q A 922578
 298 E K L T K E E I L E N W N M F V G S Q A GI 1262329

315 T N Y G E D L T R H H D E L 922578
 318 T N Y G E D L T K N H D E L GI 1262329

FIGURE 3B

1 MDL - - - - RQFLMCLSLCTAF 1601793
 1 MARGGRGRRLGLALGLLLAL GI 1262329

 17 ALS - - - - - KPTEKKDRV - H 1601793
 21 VLAPRVLRA KPTVRKERVVR GI 1262329

 30 HEPQLSDKVHNDAQSFDYDH 1601793
 41 PDSELGERPPEDNQSFQYDH GI 1262329

 50 DAFLGAEEAKTFDQLTPEES 1601793
 61 EAFLGKEDSKTFDQLTPDES GI 1262329

 70 KERLGKIVSKIDGDKDGFVT 1601793
 81 KERLGKIVDRIDNDGDGFVT GI 1262329

 90 VDELKDWIKFAQKRWIYEDV 1601793
 101 TEELKTWIKRVQKRYIFDNV GI 1262329

 110 ERQWKGHDLNEDGLVSWEEY 1601793
 121 AKVWKDYDRDKDDKISWEEY GI 1262329

 130 KNATYGYVLDDP - - - - DPDD 1601793
 141 KQATYGYYLGNPAEFHDSSD GI 1262329

 146 GFNYKQMMVRDERRFKMADK 1601793
 161 HHTFKKMLPRDERRFKAADL GI 1262329

 166 DGDLIATKEEFTAFLHPEEY 1601793
 181 NGDLTATREEFTAFLHPEEF GI 1262329

 186 DYMKDIVVQETMEDIDKNAD 1601793
 201 EHMKEIVVLETLEDIDKNGD GI 1262329

 206 GFIDLEEYIGDMYSHDGNTD 1601793
 221 GFVDQDEYIADMFSHEENGP GI 1262329

FIGURE 4A

226	E P <u>E</u> W V <u>K</u> T E R E Q F <u>V</u> E F R D <u>K</u> N <u>R</u>	1601793
241	E P <u>D</u> W V <u>L</u> S E R E Q F <u>N</u> E F R D <u>L</u> N <u>K</u>	GI 1262329
246	D G K <u>M</u> D K <u>E</u> E T K D W I L P S D Y D H	1601793
261	D G K <u>L</u> <u>D</u> K <u>D</u> <u>E</u> I R H W I L P <u>Q</u> <u>D</u> Y D H	GI 1262329
266	A <u>E</u> A E A R H L V Y E S D <u>Q</u> N K D G K L	1601793
281	A <u>Q</u> A E A R H L V Y E S D <u>K</u> N K D <u>E</u> K L	GI 1262329
286	T K E E I V D K Y D L F V G S Q A T D F	1601793
301	T K E E I L E N W N M F V G S Q A T N Y	GI 1262329
306	G E A L V R - H D E F	1601793
321	G E <u>D</u> L T K N H D E L	GI 1262329

FIGURE 4B

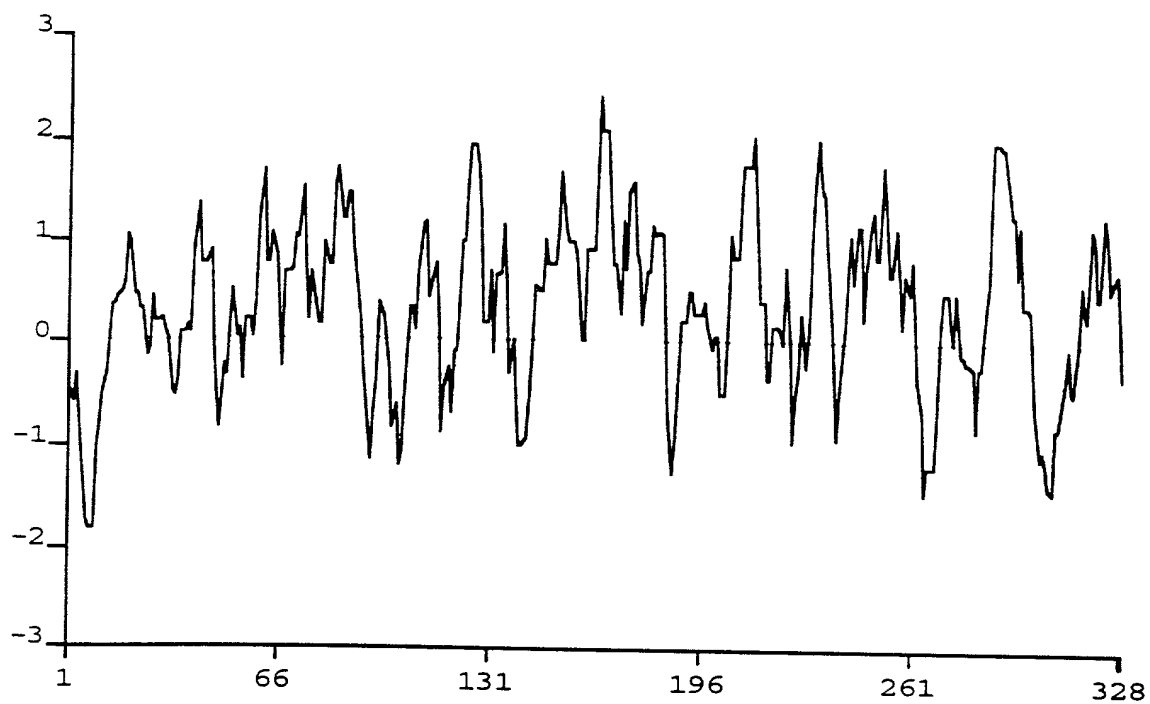


FIGURE 5A

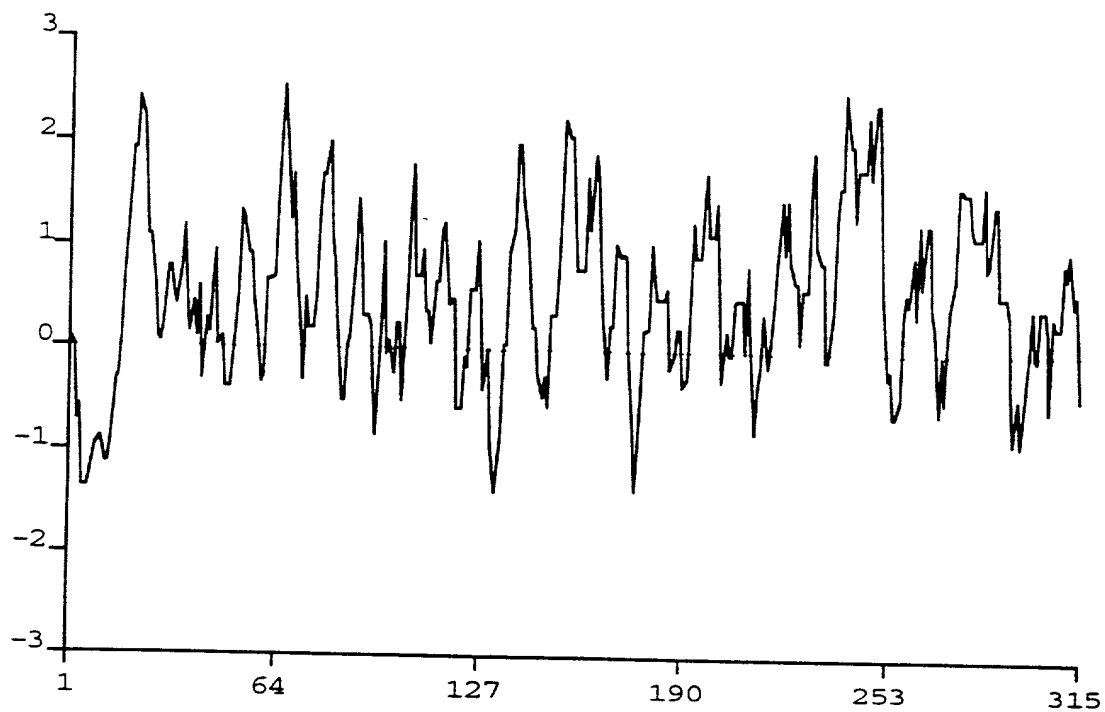


FIGURE 5B

